S
634.9805
F4mf
v.12#2
May 87

PLEASE RETURN

MONTANA FOREST PRODUCTS BULLETIN

Department of State Lands, Division of Forestry
2705 Spurgin Road, Missoula, Montana 59801
Ph: (406) 728-4300

STATE DOCUMENTS COLLECTION

MAY 20 1987

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

GARY G. BROWN, State Forester

PAUL MOORE, Editor

VOL. 12, NO. 2

MAY 1987

This bulletin is mailed primarily to individuals engaged in the Forest Products Industry in Montana. In addition, it is mailed to county agents, lumber brokers, wholesalers, dealers of sawmill and logging equipment, educators, and Montana Tree Farmers, as well as the Departments of Forestry in many states.

The purpose of this newsletter is to communicate information regarding the properties and uses of wood products, promote efficiency in the utilization of wood from the stump to the end product, and to serve as a information source for members of the forest products industry.

All persons receiving this newsletter are asked to examine their mailing address and advise this office of any corrections needed for proper mailing.

1986 MONTANA WOOD PRODUCTS INDUSTRY ECONOMIC REPORT

Production and sales levels for Montana's forest products firms during 1986 were among the highest in the industries history, according to a University of Montana research office.

Charles E. Keegan, director of forest products research at the UM Bureau of Business and Economic Research, said that production of all major products from lumber and plywood to pulp and paper, particle board and fiberboard reached record or near record highs last year.

An estimate of 1,490 million board feet of lumber production would make 1986 the second highest state-wide output year on record, exceeded only by the 1,499 million board feet produced in 1968. Plywood production was up to 671 million square feet in 1986, only 14 million square feet below the 1978 record.

Sales by Montana mills also were at record levels in 1986, according to Keegan. He said that even after adjusting for inflation, total sales value in 1986 approached the peak industry levels of 1979.

Keegan said prices for forest products, especially for lumber and paper, were up dramatically in 1986 over the previous year. He attributed those higher prices mostly to long strikes at Canadian and Northwestern U.S. sawmills, as well as the lower value of the U.S. dollar and tariffs and taxes placed on Canadian lumber entering the United States.

Montana State Library
3 0864 1006 7980 5

Increased efficiency and mechanization contributed to higher output per worker in 1986 as compared to 1985, despite fewer people employed by the industry, Keegan said. Average monthly production employment for 1986 was 4,298 workers, down from the 4,488 workers employed in 1985.

Total production and wages also continued to decline from just under $109 million in 1985 to $106 million in 1986.

These employment and wage figures refer only to production workers at mills surveyed and are not total employment figures. Not included in the estimates are nonproduction workers at the plants or the several thousand workers in related industries such as logging and trucking.

FIRE RATIONS--A TASTE FOR THE BETTER

This year Department of State Lands firefighters will be dining on less expensive, and more nutritious field rations says Paul May, Deputy Area Manager for the Southwestern Land office. The original Ready-to-Eat Meals (MRE'S) otherwise known as "mighty rank eats" were so unpalatable that it often took a combination of two meals to make one. According to May the new meals will be 75% cheaper and taste better. Firefighters will have a choice of beef stew, pork and beans, spaghetti and meatballs, or Chile with beans. Fruit juice, fruit, pudding and a candy bar will be included in each meal. As to the outlook for this year's fire season, May had no comment, but hoped the meals would remain in there boxes for another year.

NEW DEVELOPMENTS IN PLYWOOD GREEN ENDS

Sudden, radical and complete changes are occurring in the design and operation of softwood plywood. Manufacturing cost competition with other panel products, a changing log resource and the adaptability of space-age technology is providing the impetus for a more traditional evolution in processing to be transformed into a revolution; and the revolution is just now beginning.

Cost Competition

The structural board markets are growing, but softwood plywood's share in that market is threatened. A forecaster recently reminded his subscribers, with the growth of waferboard and oriented strand board (OSB) production in the U.S., the probability is that plywood will lose market share rapidly to these new structural panels. Therefore, any growth in plywood demand will depend on the strength of existing plywood markets and the ability of plywood producers to remain cost competitive with the new structural panel products.

A changing mix of logs, man-hours, materials and automated processes will result in competitive costs and product prices. Cost and necessity will force the softwood plywood producer to rely more on smaller logs, diverse species and cost-effective automated processes.

A Changing Resource

The timber and log situation in North America is rapidly changing because of the declining supplies of larger logs, a shrinking timber base and an increased sensitivity to harvesting and transportation costs.

Softwood plywood is increasingly being made from anything that can be peeled; and the definition of "anything that can be peeled" is taking on a broader meaning as the North American resource picture becomes more sharply focused on what is still yet available. The softwood plywood producer must further rely on diverse species as well as the more traditional timber supplies. Each is characterized by larger volumes of small logs.

The Technology Revolution

Four major forest products companies with operations on the West Coast and in the Southeast are examples of the technology revolution. Boise Cascade, Champion International, Willamette Industries and Georgia-Pacific each have shut down a number of plants. The remaining plywood plants have been modernized and automated at a rate never before witnessed in the industry.

Equipment and systems designed to reduce the crew count, speed up the process and increase the yield from each peeler block have been conceived, designed, manufactured and installed. Powered backup rolls, X-Y chargers, powered nose bars and linear positioned lathe knife carriages have been the major innovations introduced at the conventional lathe. The last innovation noted assures more accurate positioning and tracking of the lathe knife carriage; the result is more uniform peel thicknesses at higher peeling speeds.

HiCap System, Spindleless Lathe

Spindleless peeling was conceived by Charles Schmidt, a Diboll, Texas, machine shop owner. He read about the favorable economics of peeling to a smaller core; fortunately he was unencumbered with a detailed knowledge of the veneer peeling process and as a result originated a major new idea.

In late 1982 a 2-ft veneer lathe prototype was constructed in the back room of his machine shop. This prototype demonstrated the merits of his innovation. A subsequent 8-ft model and repeated demonstrations on a number of species reinforced the earlier conclusions: the machine could and would peel quality veneer.

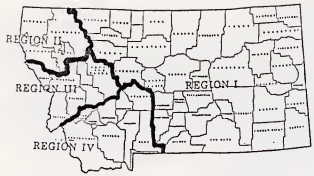
A Look Ahead

The business climate for the structural panel producer is changing rapidly along with markets and logs. And the developing technology is keeping pace in the green end. The task ahead for the producer is to keep up with the pace of turbulence and change. The softwood plywood industry will emerge as a lean, low-cost, world-class producer of structural panels. It can be done.

Source: Forest Industries, April 1987.

MONTANA LOG PRICE REPORT

The State-wide log price report on the following page catalogs recently delivered average log prices to sawmills by species using four geographical areas within Montana. Prices are provided by approximately 35 sawmills operating within the State. The report is compiled through the Extension Forester's Office, School of Forestry, University of Montana, Missoula, Montana 59812.



Office of Extension Forestry
Cooperative Extension Service
c/o School of Forestry
University of Montana
Missoula, MT 59812

MONTANA SAWLOG AND VENEER LOG PRICE REPORT

MAY - JUNE 1987

The following information is a summary breakdown of recent past average prices reportedly paid by primary wood processors for logs of the various species listed. These prices are not necessarily a reflection of current market prices. Fair market prices may vary a great deal based on log size, length, quality, contract size and terms, and a number of other factors. All information reported is recent average price per thousand board feet (MBF), Scribner Decimal rule, delivered to the mill site, unless otherwise noted.

Prices provided for this report by individual firms are treated as confidential disclosure of the firm's operations. Any requests for mill-specific data which have been provided for the log report will be denied.

SAWLOGS Scribner Dec C MBF	REGION I	*	REGION II	*	REGION III	*	REGION IV	*
	Avg. Low High		Avg. Low High		Avg. Low High		Avg. Low High	
Ponderosa pine	$110/$110/$110	P	$180/$180/$180	G			$145/$145/$145	F
(Yellow)	$147/$147/$147	G	$211/$185/$225	G	$216/$185/$235	G/F		
(Bull)	$121/$ 95/$147	G	$143/$135/$148	G/P	$133/$ 90/$180	G/P		
Lodgepole pine	$140/$140/$140	G	$147/$140/$150	G/F	$154/$140/$160	G/F	$170/$160/$180	G/F
Douglas-fir	$126/$123/$130	F	$146/$135/$160	G/P	$156/$150/$170	G/F	$169/$155/$180	G/P
Western larch			$146/$135/$160	F/P	$155/$145/$165	G/F		
Engelmann spruce	$140/$140/$140	G	$153/$135/$175	G	$165/$160/$170	G/F	$165/$155/$175	G
Subalpine fir			$143/$135/$145	G/P	$145/$140/$155	G/P	$165/$155/$175	G/F
Grand fir			$143/$135/$150	G/P	$146/$140/$155	G/P		
Western red cedar			$169/$150/$190	G/F	$175/$160/$190	G/F		
Hemlock			$139/$135/$145	F/P	$140/$140/$140	P		
White pine			$225/$190/$250	G/F	$265/$200/$330	G		
Cottonwood	$ 75/$ 75/$ 75	P						

VENEER LOGS Scribner Dec C MBF	STATEWIDE REPORT	
Species	Avg. Low High	Demand next 60 days*
Douglas-fir	$155/$145/$170	G/P
Ponderosa pine (bull)	$150/$150/$150	G
Western larch	$153/$140/$170	G/P

* Demand next 60 days

G = Good
F = Fair
P = Poor

DEPARTMENT OF STATE LANDS TIMBER SALES

Blanchard Flats Timber Sale:

Sealed bids will be received by the Administrator, Department of State Lands, Forestry Division, 2705 Spurgin Road, Missoula, Montana up to 2:00 p.m., May 26, 1987, for the merchantable timber designated for cutting in Section 16, T15N-R14W estimated to contain 547 MBF ponderosa pine, 38 MBF Douglas-fir and other, and 7 MBF dry sawlogs, more or less, for a total estimated volume of 592 MBF.

Full particulars regarding the terms of the contract regulations governing the sale and bid forms may be obtained from the Department of State Lands, Forestry Division, or the Southwestern Land Office, 1401 27th Avenue, Missoula, or the Clearwater Field Office, Box 388, Greenough, Montana.

Evers Creek II Timber Sale:

Sealed bids will be received by the Department of State Lands, Forestry Division, 2705 Spurgin Road, Missoula, Montana up to 2:00 p.m., May 27, 1987 for the merchantable sawtimber designated for cutting in Lot 4, SW¼NW¼, Section 1; E½NE¼, SW¼, N½SE¼, Section 2; N½, SW¼, Section 14; N½, Section 24; all in T31N-R24W, PMM. The Evers Creek II Timber Sale is estimated to contain 29 MBF larch, 194 MBF Douglas-fir, 19 MBF spruce, 349 MBF lodgepole pine, 50 MBF subalpine fir, and 145 MBF dead (mostly lodgepole pine), for a total of 786 MBF more or less.

Full particulars regarding the terms of the contract regulations governing the sale and bid forms may be obtained from the Department of State Lands, Forestry Division, in Missoula, or the Northwestern Land Office, 2250 Highway #93 North, Kalispell, or the Stillwater State Forest Headquarters, Olney, Montana.

Ewing Extension Timber Sale

Sealed bids will be received by the Department of State Lands, Forestry Division, 2705 Spurgin Road, Missoula, Montana up to 3:00 p.m., May 27, 1987, for the merchantable sawtimber designated for cutting on NW¼NW¼, S½NW¼, Section 2; NW¼NW¼, Section 11; all in T33N-R24W estimated to contain 136 MBF larch, 40 MBF Douglas-fir, 13 MBF spruce, 87 MBF white fir, 146 MBF lodgepole pine, 130 MBF dead (all species), for a total of 552 MBF, more or less.

Full particulars regarding the terms of the contract regulations governing the sale and bid forms may be obtained from the Department of State Lands, Forestry Division, in Missoula; the Northwestern Land Office, 2250 Highway #93 North, Kalispell; or the Stillwater Unit, Department of State Lands Office located at Olney, Montana.

Jake Creek Timber Sale:

Sealed bids will be received by the Administrator, Department of State Lands, Forestry Division, 2705 Spurgin Road, Missoula, Montana, up to 3:00 p.m., May 26, 1987, for the merchantable timber designated for cutting in Section 16, T8N-R8W estimated to contain 420 MBF Douglas-fir, 1 MBF lodgepole pine, and 1 MBF dry sawlogs, more or less, for a total estimated volume of 422 MBF.

Full particulars regarding the terms of the contract regulations governing the sale and bid forms may be obtained from the Department of State Lands, Forestry

Division, or the Southwestern Land Office, 1401 27th Avenue, Missoula, Montana, or the Anaconda Field Office, 7916 Highway 10A West, Anaconda, Montana.

Jones Bench Timber Sale:

Sealed bids will be received by the Department of State Lands, Forestry Division, 2705 Spurgin Road, Missoula, Montana up to 2:00 p.m., May 28, 1987, for the merchantable sawtimber designated for cutting on Section 10, T21N-R26W and Section 14, T21N-R26W, estimated to contain 177 MBF ponderosa pine, 1 MBF western larch, 70 MBF Douglas-fir, 534 MBF lodgepole pine, 1 MBF grand fir and 1 MBF dead (all species), for a total estimated volume of 784 MBF, more or less.

Full particulars regarding the terms of the contract regulations governing the sale and bid forms may be obtained from the Department of State Lands, Forestry Division in Missoula; the Northwestern Land Office, 2250 Highway #93 North, Kalispell; or the Plains Unit, Department of State Lands Office located in Plains, Montana.

Threemile Creek Timber Sale:

Sealed bids will be received by the Administrator, Department of State Lands, Forestry Division, 2705 Spurgin Road, Missoula, Montana up to 3:00 p.m., May 28, 1987, for the merchantable sawtimber designated for cutting on Section 16, T11N-R5W estimated to contain 392 MBF Douglas-fir, 62 MBF ponderosa pine, and 1 MBF dry sawlogs.

Full particulars regarding the terms of the contract regulations governing the sale and bid forms may be obtained from the Department of State Lands, Forestry Division in Missoula, or the Central Land Office, 8001 North Montana Avenue, Helena, Montana, phone (406)-444-3633.

ESTABLISHING A LUMBER SIZE CONTROL PROGRAM

Few industries, including the lumber manufacturing industry, can afford to waste dollars by using more raw material than necessary to produce their products. A new slide-tape entitled "Establishing a Lumber Size Control Program", #826.2 S-T, introduces the viewer to a system that allows mill managers to monitor machine efficiency and thus cut down on waste. The program, written by Dr. Terry Brown, a leading authority in the lumber quality control field, and by educational media specialists in the Forestry Media Center, is now available for sale or rent.

Aimed at sawmill managers, superintendents, quality control personnel, and forest products students, the 17-minute, 80-slide program presents an overview of the steps involved in establishing a size control program. A worksheet that accompanies the program illustrates how to calculate sawing variation, and gives viewers an opportunity to practice those calculations on some sample problems.

An excellent companion to our program 826.1 S-T, "Establishing and Organizing a Lumber Quality Control Program", "Establishing a Lumber Size Control Program" sells for $130 and can be rented for $25 for the first three days' use. For more information concerning our purchase or rental policies, or to order the program contact: Forestry Media Center, College of Forestry, Oregon State University, Corvallis, Oregon 97331-5704, phone (503)-754-4702.

WOOD BRIDGES MANY GAPS

There are more than 71,000 timber bridges in the U.S. with spans over 20 feet, according to a recent article in the USDA Forest Service Forest Products Labs Technology Transfer Opportunities. The majority of these bridges (61,400) are located on secondary and rural roads. The Forest Service maintains more than 5,000 timber bridges. it has been estimated that 45 percent of all timber bridges are in a state of disrepair.

What this means to the forestry industry is that the potential market for new or replacement bridges is tremendous at all levels. The cost to rehabilitate or replace wooden bridges on the Nation's secondary and rural road systems is estimated at $30 billion. Building new and replacing old bridges in the Forest Service system costs $10 million per year.

Timber bridges will continue to be used, as they have many advantages over other types of construction. They are aesthetically pleasing, they are made from a renewable resource. Wooden bridges are lightweight, they have excellent reserve strength, and are quickly installed and easily repaired. With these advantages look for increased use of timber bridges.

1987 BUYER'S GUIDE AVAILABLE

The 1987 edition of the Buyer's Guide and Directory to The Wood Machinery Manufacturers of America is a valuable resource guide to U.S. wood industry buyers and manufacturers. Compiled by the wood Machinery Manufacturers of America (WMMA), the guide contains complete up-to-date information on 110 wood-working machinery manufacturers and specialized machines and tools. The annual covers woodworking equipment for furniture, case goods, cabinets, plywood, veneer, and other types of wood working installations; a machine index listing the standard types of wood working equipment organized by function, including separate sections on sawmill machinery and wood residue utilization. The buyers guide and directory is available world-wide without charge. Contact WMMA headquarters at 1900 Arch St., Philadelphia, Pennsylvania, 19103. Phone: (215)-564-3484.

Source: Forest Products Journal, January 1987.

PUBLICATIONS AVAILABLE

Finishing Wood Exteriors - Selection, Application, and Maintenance. (U.S. Forest Service, Agriculture Handbook No. 647) - This report will detail the characteristics and proper application of finishes to the different solid and reconstituted wood products now available. More particularly, it will focus on detailing the characteristics of different kinds of wood, manufacturing and construction practices that affect surfaces to be finished, and the ways in which various types of finishes interact with the effects of those characteristics and practices.

Technology Transfer Opportunities - Fiscal Years 1987-1988. (U.S. Forest Service, Forest Products Laboratory) - This plan describes findings from recent wood utilization research at the Forest Products Laboratory (FPL) which we believe have reasonable potential for immediate commercial application. It lists primary user groups and technology transfer (TT) linkers who will be

involved in the application of each research result. It also shows the level of emphasis for each result that TT activities will receive at the FPL during fiscal years 1987 and 1988.

U.S. Timber Production, Trade, Consumption, and Price Statistics 1950-85. (Miscellaneous Publication No. 1453, U.S. Forest Service) - This report presents statistical information on the production, trade, consumption, and price of timber products in the United States. Although national data are shown for the most part, some material is given for regions, states, and Canada.

Unitizing Goods on Pallets and Slipsheets. (General Technical Report FPL-GTR-52, U.S. Forest Service, Forest Products Laboratory) - Packaging, handling, and shipping methods and facilities have changed drastically since World War II. Today, most products are individually packaged and then combined into unitized loads for more efficient handling, storage, and shipping. The purpose of this manual is to promote the most effective use of wood and wood fiber in current packaging and shipping practices by providing a basic understanding of the many factors involved in selecting an optimal method of unitizing goods on pallets and slipsheets. The manual also provides a valuable place of reference for the numerous standards and specifications relating to unitizing loads.

The United States Woodpulp Industry. (Resource Bulletin FPL-RB-18, U.S. Forest Service, Forest Products Laboratory) - This report provides government and industry researchers and market analysts a comprehensive review of the woodpulp industry and brings together in a single source information not available elsewhere. The capacity and production of the U.S. woodpulp industry in 1983 are reported by region and woodpulp grade, and trends in capacity and production are analyzed.

Source: Forest Products Journal, January 1987.

FOR SALE PRODUCTS

¼" to 2½" dia. x 16 ft. lg. or larger dowels available in lengths up to 10 ft. long. Balls, bases, blocks, electronic parts, handles, knobs, moulding, plugs, reels, rollers, shaping spools, toy parts, wedges and wheels, available in plain, dip spray or tumble finishes. We treat for outside use. Also, Cooper's and food processor supplies. Many other wood products to customer specs. Contact: Ed Kolbl, American Wood Working Co., P.O. Box 335, Montello, Wisconsin 53947, phone (608)-297-2131.

FOR SALE EQUIPMENT

51-10 IBM Computer complete with program A-1 condition. Precision dowell mill 1 3/4" to 8" diameter, 32' to 320' per min. peeling speed, stationary or portable. Contact: Bouma Post Yards, Drawer A, Choteau, Montana 59422, phone (406)-466-2140.

Logging Equipment and New and Used Parts For Sale: Feller Bunchers: 1) 1980 Franklin 170PSL Wheel Loader 20" Shear $27,500 2) 1976 Drott 40 Exc. w/20" Shear $35,000 3) 1983 Bobcat 1080B Low Hour Attachment - 4) Morbark 20" Shear $5,200 5) Morbark 16" $3,700 6) Drott 18" $2,400 7) Drott 20" $4,500. Cable Skidders: 8) 1980 JD 440C New Tires $21,750 9) 76 Tree Farmer C5D $13,800

10) 78 JD 540B $17,000 11) 76 Timberjack 240D $15,500 12) 80 Timberjack 240D Exc. $21,500 13) JD 540A $9,900. Grapple Skidders: 14) 80 JD 540B High Tires $27,500 15) 79 JD 540B $22,500 16) 79 Tree Farmer C5D Esko 26 $19,000 17) 80 Tree Farmer C7D $28,500 18) 79 Tree Farmer C7D $26,500. Used parts and attachments for any make skidder. Relined winch bands, tires and wheels. Many new parts at discount. Midwest Tractor, Inc., Hwy. 10, 4 Mi. West, Big Lake, MN 55309, phone Ron Berthiaume at (612)-263-3777 or eves. (612)-295-5037.

Sawmill Equipment For Sale: 1) 24" x 20" Jeffery Hammer Hog with 100 h.p. $15,000 2) 20K Valon Kone Debarker, variable speed feedworks with all electric controls $46,000 - 40 ft. 100 box infeed conveyor, 62 ft. 110 box outfeed conveyor, and 80 ft. bark conveyor 3) Log cross deck with singulator 25.5' x 16.5', 5 h.p., G.E. gearhead, #78 chain $1,800 4) Log conveyor 110 box, 54' w/5 h.p. George Oppel gearhead $2,000 5) Log conveyor 110 box, 34' w/5 h.p. Falk gearhead $2,000 6) Log conveyor 110 box, 26' w/2 h.p. U.S. gearhead $1,000 7) Chipper 58" horizontal bottom discharge (Soderhamn) 3 or 6 knife application 225 h.p. G.E. motor multi V belt drive disconnect and compensator $10,000 8) Chip Pak 48" precision with 40 h.p. motor disconnect and compensator $12,000 9) Belt conveyor 20' x 15" w/2 h.p. U.S. gearhead $1,000 10) AMF Chip feeder with Dodge speed reducer 25" x 25", chip blower 12 x 12 roots - Connerville with 25 h.p. West. motor $6,000 11) Sawmill infeed log deck 70' x 28.5' all steel $10,000 12) Portable cutoff saw $700 13) Chip Auger 12' x 2" with Dodge speed reducer $1,000 14) Refuse blower 5'4" wheel with 100 h.p. G.E. motor $1,000 15) Bark conveyor 24' with 2 h.p. West. gearhead $500 16) Compressor 5 h.p. Ing. Rand 22 cu.ft./min. $850 17) 45' sawdust conveyor $850 18) 42' 110 box log conveyor $1,000 19) Log transfer hyd. drive $450 20) 5 h.p. electric chainsaw cutoff saw $500 21) Sawmill-hyd. setworks 4"6"8"10", 34" insert tooth saws, hyd. feed, hyd. slab outfeed $25,000 22) Mandrel shaft with Strobe saws and bearings $5,000 23) Slab and slash side delivery chain deck w/3 h.p. West. gearhead 24) Motors - 200 h.p. Toshiba, 40 h.p. Toshiba, 3 h.p. Link Belt gearhead, 5 h.p. Lincoln 25) FRE Panel board 1600 amp 440 volt 3 phase 3 wire with service disconnects and feeder pan $7,000 26) Control console $250 27) Chip car mover $1,000 28) Chip and hog fuel bucket 8' x 4' $3,000 29) Cat 966C front end loader $42,500 30) 70 foot heated Murphy-Cardinal pit scale with scale house; 70 ton capacity digital read-out $22,500. Contact Ron Kazmierczak at (406)-827-3683, Thompson Falls, Montana.

Complete Sawmill For Sale: Includes straight-line Gang Rip Saw, 8 ft. Portable Brett Bolter Saw these are complete with electric motors, starters and fuse boxes, and saw blades. 1 semi portable cut-off saw with Wisconsin engine, hydraulics, saw blades, saw setter, 2 metal decks, 1 wood deck, 1958 Chev. 2 Ton truck with hoist, log bunks, metal sides, 74 Melroe Bobcat with pulpwood grapples, forks & utilities bucket. 1792 John Deere JD 350 B Diesel Crawler with JD3315 Winch, log forks, & Allen TS12 Tree Shear with mounting group & hydraulics $41,150.00. Will sell complete or separately. Contact Mrs. Harold Matye, P.O. Box 913, Monarch, Montana 59463-0913, or phone (406)-236-5352 or (406)-236-5388.

For Sale: Salem 66" Right Hand Linebar Resaw, Salem air setworks, 125 h.p. for resaw, 2 speed, 2 motor, 3 h.p. drive for linebar. Blue Babe 6 ft. right hand bandmill. Black Clawson 53" Ten Knife Chipper HFTD. Salem 8 x 8 Low Mill (LN-2) Log Turner with Graffinberger valves. Contact: Hybert Machinery, Inc., 18827 North Abiqua Road NE, Silverton, Oregon 97381, phone (503)-873-3800.

If you wish to advertise a forest product or a piece of wood-processing machinery in this bulletin complete the form below. No charge is made for this service. If you wish to rerun an item, a written request must be submitted before the next issue.

NAME OF PERSON OR FIRM: _____

MAILING ADDRESS: _____

ZIP CODE: _____ PHONE: _____

Type or print your advertisement in the space below, detach and return to:

Department of State Lands
Division of Forestry
Forest Products Bulletin
2705 Spurgin Road
Missoula, MT 59801

DEPARTMENT OF STATE LANDS
DIVISION OF FORESTRY
2705 Spurgin Road
Missoula, MT 59801

BULK RATE
U.S. POSTAGE PAID
PERMIT NO. 345
MISSOULA, MT 59801